



Poway Landfill Community Meeting

Jack Miller
County of San Diego
Solid Waste Local Enforcement
Agency (LEA)

August 31, 2006



Who are we?

- **County of San Diego**
Department of Environmental Health
Solid Waste Local Enforcement Agency
- **California Environmental Protection Agency**
Regional Water Quality Control Board
- **County of San Diego**
Department of Public Works
Landfill Management



Tonight

- Jack Miller will present brief review of previous investigation and overview of current results
- Sam Williams from GeoSyntec Consultants will present detailed discussion of investigation and risk modeling results
- Questions and Answers

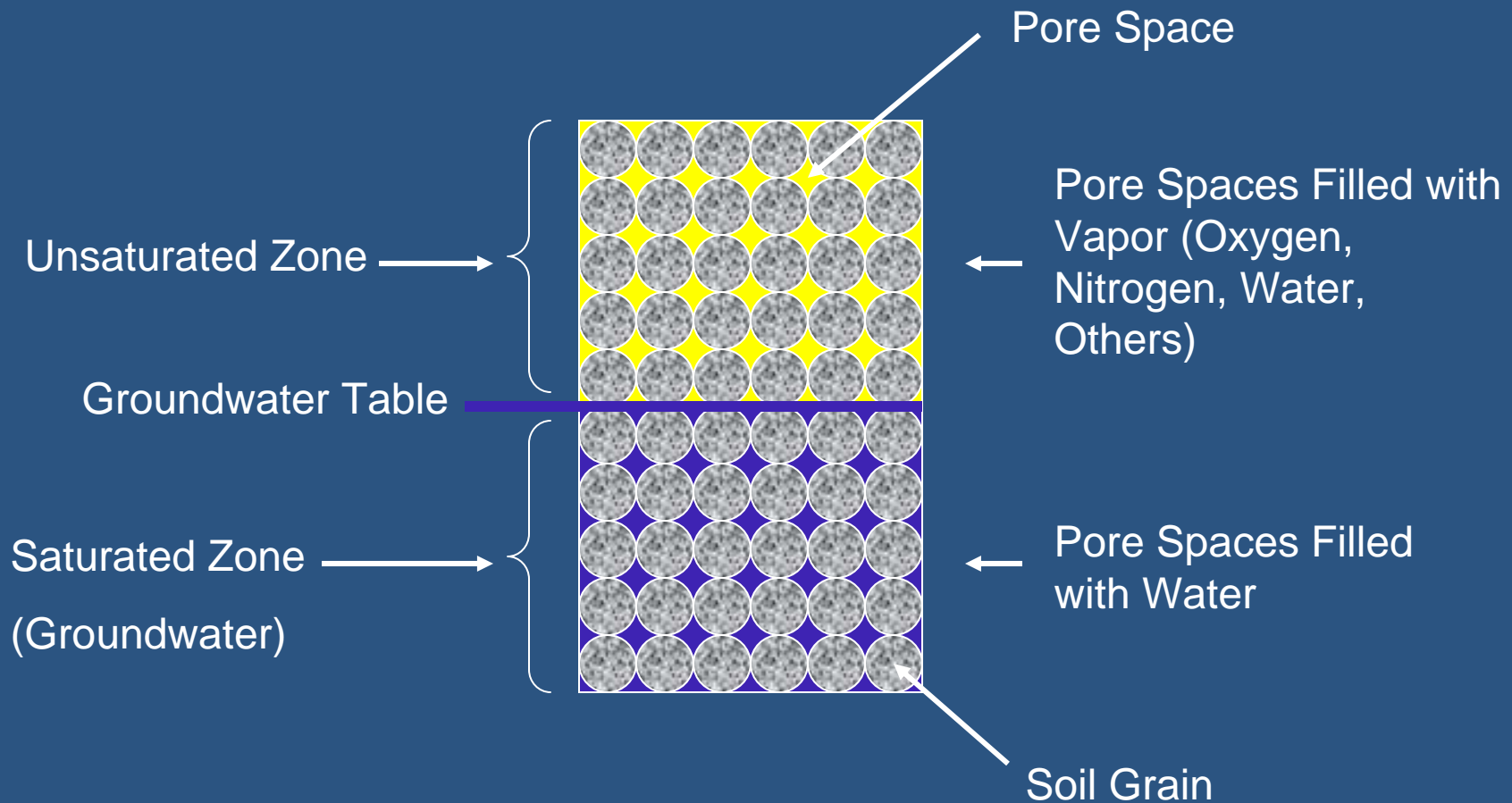


Refresher Course – Analytical Terms 101

- **VOCs** – volatile organic compounds
 - **PCE** – tetrachloroethene (dry cleaning solvent)
 - **TCE**- trichloroethene (common solvent)
 - **benzene** – a component of gasoline
- **ground water** – water contained within soil pores. It is not used for drinking, bathing or irrigation in the neighborhood.
- **soil gas / soil vapor** – gasses found within the open spaces/voids between soil particles

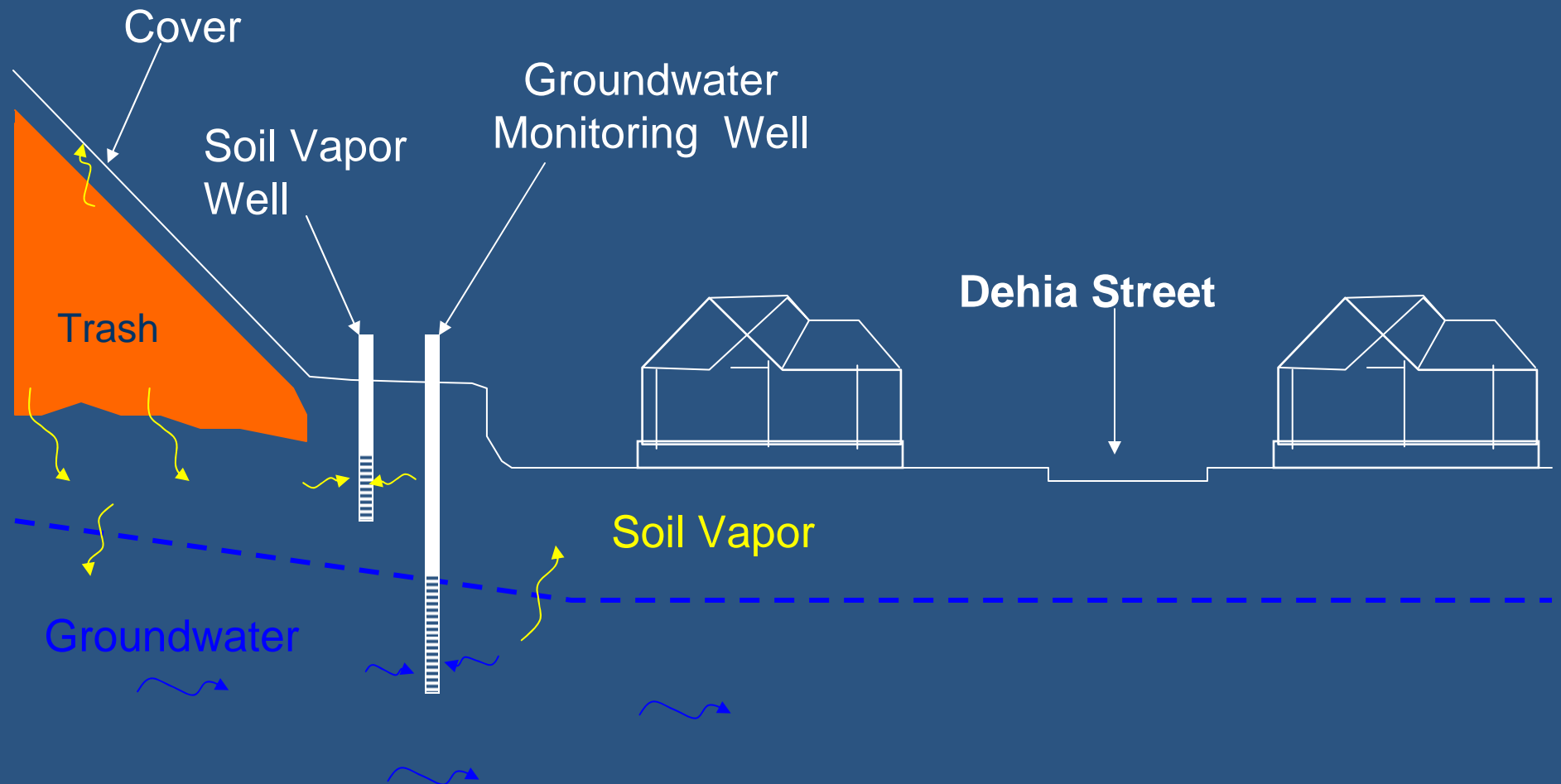


Groundwater and Soil Vapor





Where do we look for contaminants?





Summary of Previous Results

- Results of temporary soil gas screening probes showed elevated concentrations of benzene, PCE and TCE in Dehia Street.
- Human health risk assessment models indicated a slightly increased cancer risk
- Additional investigation needed, including the installation of numerous permanent soil vapor probes. The results will be discussed tonight.



Investigation Summary

- DPW added 38 new permanent soil vapor probes and 4 ground water monitoring wells
- Sampled soil vapor probes in April, May and July (3 rounds of sampling)
- Soil vapor results were consistent all three rounds and were lower than previously seen with temporary probes
- Ground water data was consistent with previous sampling (low levels of VOCs were observed)
- Completed risk assessment modeling using new data³



Risk Model Assumptions

- The highest concentration of each chemical detected used in model
- Highest concentrations assumed to be 5-feet directly below hypothetical residence
- Model assumed no or very limited protection by foundation slab
- The model uses very conservative, health protective assumptions: such as a 30-year, 24-hour a day, 350-days per year exposure to highest concentrations



REVISED Risk Model Results

Level of Concern:

A less than one in a million (1 in 1,000,000) increased cancer risk is generally considered to be below levels of concern

Results:

Using the collected data from 3 rounds of sampling, the results were less than 1 in 1,000,000 to less than 1 in 10,000,000 increased cancer risk



Risk in Perspective

The American Cancer Society has estimated the lifetime risk of developing cancer from all causes is:

- American Female : 1 in 3
- American Male 1 in 2

Compare to 1 in 1,000,000 and 1 in 10,000,000 excess cancer risk with exposure to contaminants detected near the landfill.



Indoor Air Sources

Source	Benzene	Toluene	Ethylbenzene	Xylene	Styrene	Trimethylbenzene	Naphthalene	Trichloroethene	Trichloroethanes	Tetrachloroethene	Chlorobenzene	Decane
Latex Paints	X	X				X						
Alkyl Paints										X	X	
Carpets	X	X			X	X						
Glued Carpets	X	X			X	X					X	X
Wood Burning		X		X	X	X	X					
Foam Board											X	
Paint Removers		X					X					
Spray Products				X				X		X		
Adhesives / Tapes		X			X			X				X
Room Deodorants											X	
Tobacco Smoke	X	X	X	X	X							
Gasoline / Exhaust	X	X		X	X	X	X					
Solvents		X	X					X	X	X		
Dry Cleaning										X		

From Hers et al., 2001. The use of indoor air measurements to evaluate intrusion of subsurface VOC vapors into buildings, J. Air & Waste Manage. Assoc. 51:1318-1331. 12



California Cancer Registry (CCR) Study

- The CCR was contacted by the LEA and Channel 10 News
- CCR determined no indications an excess cancer (leukemia & lymphoma) incidence exists in the census tracts surrounding the Poway landfill
- The LEA received only one report of two cancer cases in the neighborhood.
- The CCR will conduct a more detailed investigations if they receive additional reports of cancer



Results of the Investigation

Sam Williams of GeoSyntec Consultants will now present the results of the investigation conducted for Public Works





Conclusions

- Results with permanent soil vapor wells look encouraging
- Continued testing to evaluate seasonal variations
- Additional ground water investigation will be performed
- The LEA will schedule another meeting in Spring 2007 following testing



For more information visit:

- LEA web site www.sdcdeh.org
 - Updated information and reports
 - Frequently asked questions
 - Links to the Regional Water Quality Control Board's web site
- Poway Library will have copies of all reports, and the information and will be kept current



Question and Answer Panel

Kelly Dorsey, RWQCB

Barry Pulver, DPW

Candace Gibson, DPW

Rodney Lorang, DEH County Counsel



Questions